



Cognitive and Affective brand trust: an approach to baby care category

By

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Biography

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Abstract

In a brand era, brand trust is a relevant topic for both management and academy. The decisive goal of marketing is to create a powerful bond between the consumer and the brand, and the main element of this bond is trust (Hiscock, 2001).

Nevertheless, previous studies about the topic have essentially focused on commonly purchased low inherent risk products (Srivastava *et al.*, 2016). Thus, this study will contribute to filling this gap since it intends to empirically investigate Cognitive and Affective brand trust antecedents in the context of a high perceived risk product category. The proposed model is new, allowing a new approach. The main innovativeness of the proposed model is the empirical investigation of Consumer's consumption of brand-related social media content as an antecedent of Cognitive and Affective brand trust, with the surplus of empirically examine the invariance of the proposed model between two different groups - insignia brand and national brand, which is a relevant topic nowadays.

A quantitative research methodology using an online survey questionnaire to collect data was conducted. In order to analyse the results and test the hypotheses, the Structural Equation Model (SEM) was used. Baby food category (Fruit compotes) was the object of this study, since it represents a high-risk product category where trust gains extra importance.

This investigation concludes that Brand credibility positively and directly influences Cognitive brand trust. However, Consumer's consumption of brand related social media content was not confirmed as a Cognitive brand trust antecedent. Consumer's consumption of brand related social media content and Cognitive brand trust positively and directly influences Affective brand trust. For both groups – insignia and national brand – it was assumed metric noninvariance, which has its roots on Brand credibility and Cognitive brand trust constructs.

Key Words - Brand trust, Affective brand trust, Cognitive brand trust, insignia brand, national brand

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Resumo

Numa era em que as marcas assumem um papel crucial, Confiança na marca é um tópico relevante tanto para a academia como para a gestão. O verdadeiro objetivo do marketing é criar uma relação forte entre consumidor e a marca, sendo a Confiança o principal elemento (Hiscock, 2001).

Pode-se no entanto concluir que estudos prévios focam-se maioritariamente em bens de baixo risco inerente (Srivastava *et al.*, 2016). Assim, este estudo pretende preencher este *gap*, uma vez que propõe-se a investigar empiricamente os antecedentes de Confiança cognitiva e Confiança afetiva na marca, no contexto de uma categoria com elevado risco inerente. O modelo proposto é novo, permitindo uma nova abordagem. A inovação do modelo encontra-se especialmente na investigação empírica de Consumo de conteúdo relacionado com a marca nos social media como antecedente de Confiança cognitiva e afetiva na marca. É analisada a invariância do modelo proposto para dois grupos – marca própria e de fornecedor, dada a atual relevância do tema.

Foi utilizada uma metodologia quantitativa e, para recolha de dados, foi conduzido online um inquérito por questionário. Para análise dos resultados e teste das hipóteses, foi utilizada a abordagem do Modelo ds Equações Estruturais. Como objeto de estudo, foi escolhida a categoria alimentar para bebés, especificamente Compotas de fruta, pois é uma categoria com elevado risco onde a confiança ganha uma importância adicional.

Este estudo conclui que Credibilidade da marca influencia positiva e diretamente a Confiança cognitiva na marca. Por outro lado, não se provou uma influência direta e positiva de Consumo de conteúdo relacionado com a marca nos social media na Confiança cognitiva na marca. O Consumo de conteúdo relacionado com a marca nos social media e Confiança cognitiva na marca influenciam direta e positivamente Confiança afetiva na marca. Para ambos os grupos – marca própria e de fornecedor – assumiu-se não invariância métrica.

Palavras-chave – Confiança na marca, Confiança afetiva na marca, Confiança cognitiva na marca, marca própria, marca fornecedor

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1. Introduction

1.1 Research topic, relevance, motivation and aim

The research topic chosen for this dissertation is entitled as “Cognitive and Affective brand trust: an approach to baby care category”.

Considering we are currently living in a brand era, brand trust is a relevant topic for companies. It is the most important attribute a brand can own, as Delgado-Ballester *et al.* (2003) note. The decisive goal of marketing is to create a powerful bond between the consumer and the brand, and the main element of this bond is trust (Hiscock, 2001).

It is essential for both management and academic purposes to understand the antecedents of brand trust and to recognize a robust brand trust scale. Trust is an evidence of quality in a consumer-brand relationship (Srivastava *et al.*, 2015).

In terms of academic purposes, there are many authors and studies about the topic. However, despite the unanimous opinion that the brand trust is important to the consumer-brand relationship, there is no consensus about its definition and antecedents (Lassoued and Hobbs, 2015).

The research aims to contribute to a better understanding of brand trust - Cognitive and Affective brand trust -, specifically the state of art and respective antecedents. More into detail, this study intends to empirically investigate Cognitive and Affective brand trust antecedents in the context of the baby category. Furthermore, the study intends to apply the brand trust model for an insignia and a national brand and, consequently, analyse the invariance between the two groups.

This investigation is one between others that examines the role of brand trust antecedents in less researched context of high-risk products, which assumes a relevant role in this study. The pertinence of this topic is related, among others, with the discussion of the state of the art in terms of brand trust and in terms of insignia and national brands.

There are no extended investigations considering the effect of brand trust in different product categories on consumer-brand relations (Aydin *et al.*, 2014). Specifically, in the context of high perceived risk product category such baby food products. Previous studies have essentially focused on commonly purchased low inherent risk products (Srivastava *et al.*, 2016).

Thus, this study will contribute to filling this gap with the surplus of empirically examine the invariance of the proposed model between two different groups - insignia brand and national brand - in the context of the baby category. This aspect is truly relevant since insignia brands are not seen as trustworthy by the consumers (Brandão, 2014) and, as trust can take on extra importance in the context of baby care products (Aydin *et al.*, 2014).

1.2 Methodology

To address the research topic, a quantitative research methodology using an online survey questionnaire to collect data will be conducted. The target population of the survey is Portuguese consumers who buy fruit compotes for babies (up to two years old). The survey will be disseminated by FEP dynamic email, via Facebook messages and feed, groups, pages, and blogs created by and for parents. In resume, convenience sample and snowball techniques will be used. To analyse the results and test the hypotheses, a Structural Equation Model (SEM) technique will be used. Later, invariance will be tested within the two groups: insignia brand and national brand.

1.3 Results

This investigation result's will evidence that Brand credibility positively and directly influences Cognitive brand trust. However, Consumer's consumption of brand related social media content was not confirmed as a Cognitive brand trust antecedent. Consumer's consumption of brand related social media content and Cognitive brand trust positively and directly influences Affective brand trust. For both groups – insignia and national brand – the results will show metric noninvariance, which has its roots on Brand credibility and Cognitive brand trust constructs.

1.4 Structure

This dissertation will be structured in two main parts. In the first part will be presented the review of relevant literature around the definition and antecedents of brand trust. Additionally, it will be presented some literature review about Consumer's consumption of brand-related social media content and insignia and national brands specificities.

In the second part will be presented the empirical study. Firstly, it will be presented the research objectives and object of study. Then, it will be presented the proposed model, measurement scales, and the research hypotheses. Methodology' relevant considerations about the questionnaire such as latent variables, collection and processing of empirical data and sample characterization will then be explained in detail. Finally, the technique used to analyse the data will be described. Subsequently, the results of the research will be presented as well as the hypotheses analysis. Next, the results will be discussed.

Finally, the main conclusions of the dissertation will be presented, as well as its academic and managerial contributions. Also, main limitations and suggestions for future research will be referred.

Last sections present references and appendix.

I - Literature review

2. Brand trust

The following sections of this chapter present some literature review about brand trust. Particularly, the discussion will be based, among others, on the different studies regarding the multiple definitions of brand trust definitions and its antecedents.

2.1 Brand Trust

There is an extended literature discussion about institutional trust (Lassoued and Hobbs, 2015), mostly since Morgan and Hunt (1994) theorized about the importance of trust for relationship marketing (Delgado-Ballester, 2004). Morgan and Hunt (1994) explain the two elements of trust - reliability and integrity – and mention their association with consistency, competency, honesty, fairness, responsibility, helpfulness and benevolence. Rousseau *et al.* (1998) acknowledge trust as a psychological state comprising the intention to accept vulnerability based on the positive expectations of intentions or behaviours of another. Trust is essential to a stable, durable (Gurviez and Korchia, 2003) and healthy (Fournier, 1998) relationship, hence different disciplines have studied the concept of trust and have recognized it as a complex concept (Lassoued and Hobbs, 2015).

Brand trust has been deserving similar attention in the matter of consumer-brand relationships. Among various disciplines such as psychology, sociology, economics, marketing and management there is no consensus either on a standard definition of brand trust, on its dimensionality, or approaches to its measurement, despite the unanimous opinion that the brand trust is important to the consumer-brand relationship (Lassoued and Hobbs, 2015). The interest of several disciplines about the topic has been increasing its richness, however, it has been also increasing the difficulty of consensus. The key issue is based on which antecedents is brand trust formed (Delgado-Ballester *et al.*, 2005).

Firstly, brand trust was analysed in the marketing literature globally, without specific dimensions. Then, due to the increasing relevance of the topic, it became mandatory to the academy to understand the specific dimensions/antecedents of brand trust, keeping in mind emotions and rationality. The brand trust concept has expanded over the years: it has been considering not only product and performance expectations but also emotional evaluations (Srivastava *et al.*, 2016). Nowadays, recent academic studies are focused on analysing brand trust as a macro topic and applying the brand trust concept across industries, product categories and cultures, among others. As Bastos *et al.* (2015) acknowledge, in recent years' brand trust and the consumer-brand relations have been empirically examined more into detail.

Delgado-Ballester (2004) theorized that applying a trust concept (an interpersonal relationship theory) could not be well understood since the brand is an inanimate object. Differently from a person, a brand is unable to respond to the consumer (Delgado-Ballester *et al.*, 2003). However, brands are no longer a product. Brands have been assuming a partner role in the customer-brand relationship (Folse *et al.*, 2013 cited on Srivastava *et al.*, 2016). In this domain, the brand is an active relational partner (Delgado-Ballester, 2004), consumers easily attribute personalities' qualities to them (Aaker, 1997) and will not just perceive them (Delgado-Ballester, 2004). In Fournier's study (1998) can be found complete arguments that legitimize the brand as a partner.

A brand goal is to "own" the customer by building high-trust relationships. High-trust relationships increase the array of products and services that can be sold (Johnson and Grayson, 2005).

Brand trust is affected by consumers direct (e.g.: trial, usage) and indirect contact (e.g.: advertising, word of mouth) with the brand. So, it could be said that brand trust is an experience attribute (Keller, 1993).

Lau and Lee (1999) defined brand trust as the "Willingness to rely on the brand". Their study proposes the following constructs as brand trust antecedents: brand predictability, brand linking, brand competence, brand reputation and trust in the company. However,

Li *et al.* (2008) argue that the study is focused on the brand itself rather than specific dimensions, which results in a measurement scale of a global nature.

Chaudhuri and Holbrook (2001, p.82) define brand trust - in consonance with the trust definition provided by Morgan and Hunt (1994) - as “The willingness of the average consumer to rely on the ability of the brand to perform its stated function” and identify two brand trust aspects: Utilitarian value and Hedonic value. In concrete, they examine purchase loyalty and attitudinal loyalty, as linking variables in the chain of effects from brand trust and brand affect to brand performance - market share and relative price (Chaudhuri and Holbrook, 2001). However, this approach centers on the performance competence (Li *et al.*, 2008) and omits the motivational aspects associated with brand trust, which may limit its conceptual richness (Delgado-Ballester *et al.*, 2003).

Gurviez and Korchia (2003) mention that from the consumer standpoint, brand trust is a psychological variable that reflects a set of accumulated presumptions relating to credibility, integrity, and benevolence that a consumer attributes to the brand.

Delgado-Ballester *et al.* (2003, p. 11) proposes the follow definition: “Feeling of security held by the consumer in his/her interaction with the brand, that it is based on the perceptions that the brand is reliable and responsible for the interests and welfare of the consumer”; and Delgado-Ballester (2004, p.574): “The confident expectations of the brand’s reliability and intentions in situations entailing risk to the consumer”. This means these studies analyse brand trust through two antecedents – brand reliability and brand intentions. Reliability is the perceived trustworthiness on the brand’s functional performance (Almeida, 2013), it is the brand trust attribute that will help brands to earn customers’ rational trust (Ong and Zien Yusoff, 2016). Brand intentions reflect an emotional security on the part of the individuals (Delgado-Ballester, 2004) and will help to earn the customer’s emotional trust (Ong and Zien Yusoff, 2016). Regarding this approach, Li *et al.*, (2008) acknowledge that by incorporating reliability and intentions on the scale, the authors are considering additional facets and expanding the domain of brand trust. These scales are well-known scales in the brand trust literature and have been

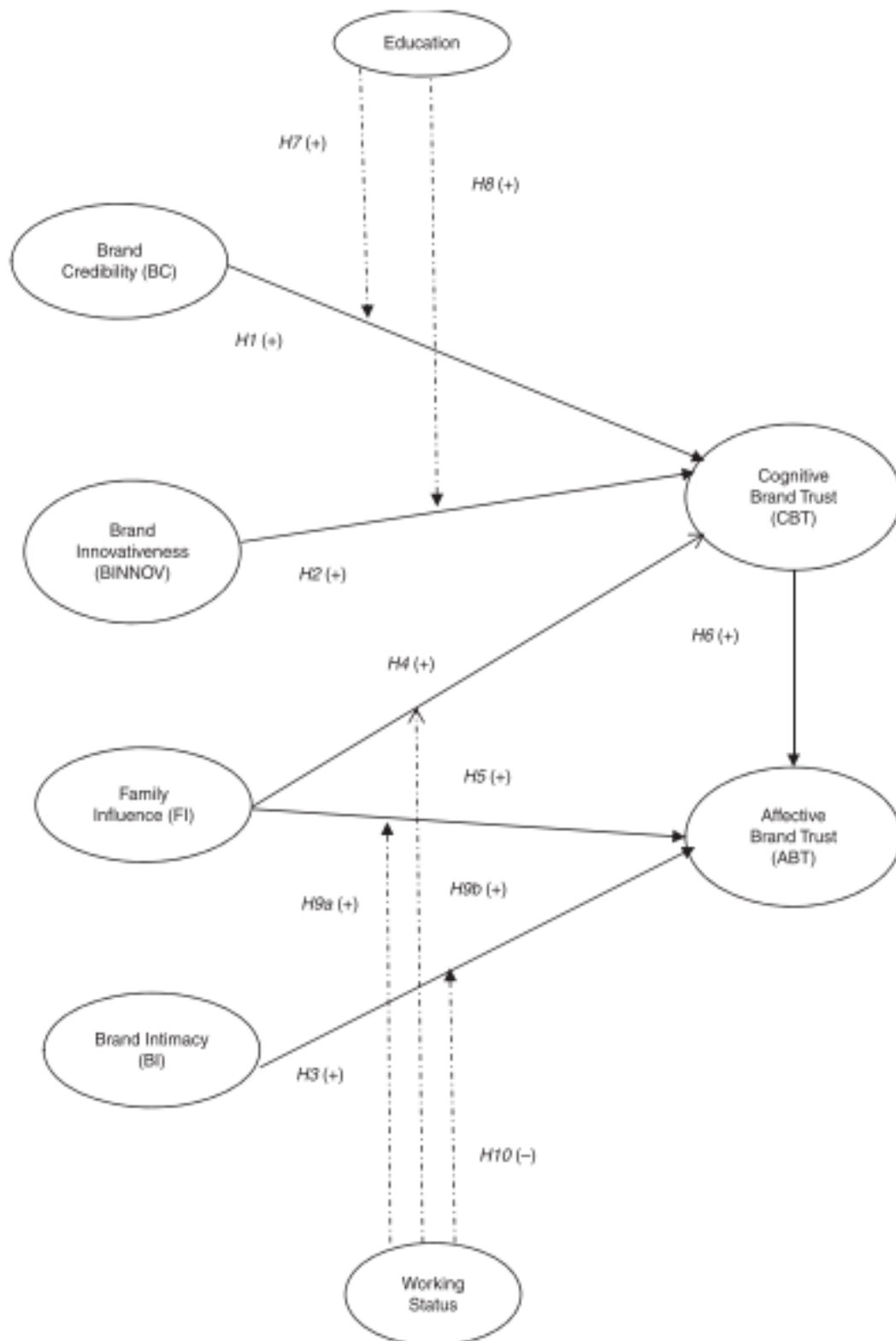
applied in more recent studies such as Ong and Zien Yusoff (2016), Gözükarar *et al.* (2016), Bastos *et al.* (2015) and Başer *et al.* (2015).

Johnson and Grayson's (2005) work - about financial adviser's services - explore Cognitive and Affective brand trust as two dimensions of trust - based on the theoretical precedent from the social psychology work of Lewis and Weigert (1985). Cognitive and Affective brand trust are considered as distinct constructs once these dimensions affect consumer-brand relationship differently with unique antecedents (Srivastava *et al.*, 2016). This approach is complete since it considers both technical and emotional components of brand trust (Srivastava *et al.*, 2016). Johnson and Grayson's (2005) also mention a third dimension called behavioural trust, that establishes the movement from a state of Cognitive and affective trust.

Recently Srivastava *et al.* (2015) empirically tested brand predictability and brand innovativeness as Cognitive brand trust antecedents and brand intimacy as Affective brand trust antecedent. In an attempt to improve their model - it means, in order to better explain brand trust in high inherent risk products - Srivastava *et al.* (2016) tested and proved Brand credibility, brand innovativeness and family influence as antecedents of Cognitive brand trust and brand intimacy and family influence as antecedents of Affective brand trust.

These studies introduced in the brand trust literature an innovative analyse that can help to explain how brand trust is formed: the moderating roles. Srivastava *et al.* (2015) address the impact of the following moderation roles: openness to experience (for brand innovativeness), conscientiousness (for brand predictability) and agreeableness (for brand intimacy). Only the moderation role of openness to experience was not empirically supported. Srivastava *et al.* (2016) address the impact of the following moderation roles: education (for credibility and brand innovativeness) and working status (for family influence and brand intimacy). The data analysis proved that the model is different between working and non-working groups and it is similar between high and low educated groups.

Figure 1 - Srivastava et al. (2016) study's theoretical framework



Source: Srivastava *et al.* (2016)

Despite the several definitions and antecedents proposed by various authors, it is consensual, as Delgado-Ballester *et al.* (2003) acknowledge, that brand trust is related to reducing consumer uncertainty and consequently the effects of perceived risks. So consumers believe that the brand's behaviour is motivated by favourable and positive intentions concerning the consumer's needs and well-being. Also, they believe that the brand will meet their interests when unexpected problems with the consumption of the product arise (Delgado-Ballester *et al.*, 2003). Therefore, brand trust has been used as a risk reduction strategy (Lassoued and Hobbs, 2015). Accordingly, brand trust becomes even more fundamental in the context of high-risk products category (Srivastava *et al.*, 2016) such baby food products category.

The study of brand trust has already been extended to employer branding by Rampl and Kenning (2014).

The following table presents some studies about brand trust and their relevant findings on brand trust antecedents, considering different authors:

Table 1 - Literature review on the attributes of brand trust

Studies	Brand trust antecedents	Object of study
Determinants of brand trust in high inherent risk products: The moderating role of education and working status (Srivastava <i>et al.</i> , 2016)	Cognitive brand trust: Brand credibility, brand innovativeness Affective brand trust: brand intimacy, family influence	Baby oil and baby skin lotion
Consumer confidence in credence attributes: The role of brand trust (Lassoued and Hobbs, 2015)	Perceived credibility, perceived competence, perceived benevolence, perceived reputation	Branded packaged green salad

Antecedents and moderators of brand trust in the context of baby care toiletries (Srivastava <i>et al.</i> , 2015)	Cognitive brand trust: brand predictability, brand innovativeness Affective brand trust: brand intimacy	Baby oil and baby skin lotion
Consumer's Trust in the Brand: Can it be built through Brand Reputation, Brand Competence and Brand Predictability (Hasan <i>et al.</i> , 2009)	Brand Reputation, Brand Competence and Brand Predictability	Non-durable brand items
Brand trust as a second order factor (Li <i>et al.</i> , 2008)	Competence, benevolence	Detergent, beer, digital camera, laptop computer, car and wireless phone service
Cognitive and affective trust in service relationships (Johnson and Grayson, 2005)	Cognitive brand trust: product performance, expertise, satisfaction with previous interactions Affective brand trust: firm reputation, similarity, and Cognitive trust	Service - financial advisers
Applicability of a brand trust scale across product categories: A multigroup invariance analysis (Delgado-Ballester, Elena, 2004)	Reliability, intentionality	Deodorant and beer
Development and validation of a brand trust scale (Delgado-Ballester <i>et al.</i> , 2003)	Reliability, intentionality	Deodorant

Proposal for a multidimensional brand trust scale (Gurvies and Korchia, 2003)	Credibility, Integrity, Benevolence	Cosmetics and Coca-cola
The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty (Chaudhuri and Holbrook, 2001)	Utilitarian value, Hedonic value	50 different products
Consumers' trust in a brand and the link to customer loyalty (Lau and Lee, 1999)	Brand predictability, brand link, brand competence, brand reputation, trust in the company	Non-durable goods

Source: own elaboration

2.1.1 Cognitive and Affective brand trust

Cognitive and Affective brand trust are considered as distinct constructs once these dimensions affect consumer-brand relationship differently with unique antecedents (Srivastava *et al.*, 2016).

Cognitive trust was introduced in the marketing literature by Johnson and Grayson (2005) in their study about service relationship.

Cognitive brand trust emerges from an accumulated knowledge that allows customers to make predictions, with a certain level of confidence, and also allows them to build confidence that the brand will meet its obligations (Johnson and Grayson, 2005).

Johnson and Grayson (2005, p. 501) define Cognitive trust has a “customer’s confidence or willingness to rely on a service provider’s competence and reliability”. At the product brand level, Srivastava *et al.* (2016) define Cognitive brand trust as the knowledge driven trust in a brand, where the customer has “good reasons” to have faith in the brand.

Srivastava *et al.* (2016) point the concept of reliableness, based on a “leap of faith”. It refers to the confidence that a customer has for a brand competency and reliability. Reliability is the perceived trustworthiness on the brand’s functional performance (Almeida, 2013). In terms of consumer brand relations, there are consumer’s expectations and needs to be accomplished and satisfied by the brand. Therefore, brand reliability represents a set of technical or competency-based nature items. This dimension is essential because it provides to consumers a certain confidence about future satisfaction (Delgado-Ballester, 2004).

If there was a state of complete certainty respecting brand future actions, it wouldn’t exist risk and trust would be redundant. However, trust is needed because the consumer lives in a state of incomplete knowledge (Johnson and Grayson, 2005).

Affective brand trust should be developed after Cognitive brand trust since Cognitive brand trust provides the basis for it (Lewis and Weigert, 1985). However, there are some previous researchers that believe that the relationship between cognition and affect in attitude formation should work both directions (Johnson and Grayson, 2005).

Affective brand trust can drive customer trust in a brand to be more than which is justified by available knowledge (Srivastava *et al.*, 2016).

This dimension is the emotional dimension of trust, it “is reliance on a partner based on emotions” (Johnson and Grayson, 2005, p.501). Customers may build positive perceptions about the brand based on affective signals (Srivastava *et al.*, 2016).

Affective brand trust reflects the consumer perceived strength of the consumer-brand relationship (Johnson and Grayson, 2005). It designates confidence based on the level of care and concern exhibited by the brand (Srivastava *et al.*, 2016).

This dimension is essential for consumers to evaluate high-risk product categories, such as baby categories (Srivastava *et al.*, 2016). However, it could make the consumer-brand relationship less transparent concerning objective risk (Johnson and Grayson, 2005).

Srivastava *et al.* (2016) prove that in the context of baby care category, Cognitive brand trust is an antecedent of Affective brand trust.

(H4: Cognitive brand trust positively influences Affective brand trust)¹

2.1.2 Brand credibility

Literature has examined Brand credibility and its relationship with brand trust (Lau and Lee, 1999; Gurviez and Korchia, 2003; Johnson and Grayson, 2005; Lassoued and Hobbs, 2015; Srivastava *et al.*, 2016).

Brand credibility has been predominantly conceptualized as a signal of product quality (Keller and Aaker, 1992; Srivastava *et al.*, 2016) and as a signal that the brand must have some competence in the area (Keller and Aaker, 1992), lowering perceived risk and information costs (Lassoued and Hobbs, 2015). Brand credibility is defined by Erdem *et al.* (2006, p.191) as the “believability of the product information contained in the brand, which requires that consumers perceive that the brand has the ability and willingness to continuously deliver what is promised”.

Since the consumer lives in a state of incomplete and asymmetric knowledge, credibility is expected to be a key element of customer trust in a brand (Lassoued and Hobbs, 2015).

Srivastava *et al.* (2016) prove that Brand credibility is an antecedent of Cognitive brand trust.

(H1: Brand credibility positively influences Cognitive brand trust.)

¹ The numeration of the research hypotheses follows the proposed model sequence, which will be present in chapter 5. The Literature review chapter is not organized accordingly to the research hypotheses sequential numeration.

2.1.3 Brand trust consequences

Trust has been treated as a critical predictor of favourable marketing outcomes. Trust increases competitiveness, reduces searching and transaction costs, and mitigates opportunism under uncertain contexts (Doney and Cannon, 1997). Scholars are increasingly becoming interested not only in how brand trust is formed but also on its favourable consequences. It is unanimous that brand trust creates a positive impact across several essential marketing constructs.

Chaudhuri and Holbrook (2001) mention that brand trust has implications to other relevant areas such as brand loyalty and brand equity.

Most of the existing marketing and business literature focuses on the direct relationship between brand trust and brand loyalty (Lassoued and Hobbs, 2015).

Fournier study (1998) provides a clear explanation for the difference between brand loyalty and brand trust: brand loyalty is demarcated as consumer commitment to repurchase a chosen brand consistently in the future. While trust is more about perceptions, loyalty is theorized as the behaviour engaged in over successive transactions. Lau and Lee (1999) results' show that there is a positive relationship between trust in a brand and brand loyalty. The study also mentions that trust in a brand is a crucial element in brand loyalty development. Chaudhuri and Holbrook (2001) also prove the positive influence of brand trust on the two brand loyalty dimensions - attitudinal and behavioural. Loyalty is a result of the ongoing process of maintaining a relationship that has been created by the trust (Chaudhuri and Holbrook, 2001). According to several authors, such as Lau and Lee (1999), Chaudhuri and Holbrook (2001), Delgado-Ballester et al. (2003) and Delgado-Ballester *et al.* (2005) brand trust leads to brand loyalty because it creates exchange relationships that are highly valued. So, in conclusion, the literature shows concordance about brand trust being an antecedent of brand loyalty.

Brand trust has also been treated as a crucial component of brand equity and its essential in brand buying behaviours (Luk and Yip, 2008, cited on Srivastava *et al.*, 2016). Brand

trust contributes to a better explanation of brand equity through brand loyalty (Delgado-Ballester *et al.*, 2005).

In their study, Morgan and Hunt (1994) prove the favourable impact of brand trust on brand commitment. Brand trust drives to more commitment and motivates higher market share and premium prices (Chaudhuri and Holbrook, 2001).

3. Consumer's engagement with brand-related social media content

The following sections of this chapter present some literature review about Consumer's engagement with brand-related social media content. Particularly, the discussion will be based, among others, on the different levels of this concept and its importance for brand management nowadays, which provides support for the importance of crossing these concepts with brand trust topic.

Facebook, YouTube, Twitter, among others, have become more and more significant in consumers' lives and impacted their communication behaviours: in the 1990's consumers started using bulletin boards on sites such as Yahoo to share information about products; nowadays, consumers relationship with social media is reshaping consumers engagement with brands and consequently marketing, due to social media interactive nature (Schivinski *et al*, 2016).

Schivinski *et al*. (2016), in their study "Measuring Consumers' Engagement with Brand-Related Social-Media Content - Development and Validation of a Scale That Identifies Levels of Social-Media Engagement with Brands" cover a massive range of brand related social media activities and identify different levels (dimensions) of engagement: consumption, contribution and creation of brand related social media content. These three dimensions are based on previous literature about the topic, namely on the study "Consumer's Online Brand-Related Activities" (Muntinga *et al*, 2011). The proposed framework is defined as a set of brand-related online consumer's activities that diverge in the degree to which they interact with social media and consequently engage in the consumption, contribution, and creation of media content (Schivinski *et al*, 2016). Muntinga *et al*. (2011) demonstrate that brand-related activity on social media is principally motivated by information and entertainment.

As well, in their study "Consumer engagement in a virtual brand community: An exploratory analysis", Brodie *et al*. (2013) acknowledge that consumer engagement is a multidimensional and dynamic concept covering Cognitive, emotional, and/or behavioural dimensions, playing a vital role in the process of relational exchange and which may arise at different levels of intensity over time, accordingly reflecting distinct

engagement states. These authors also identify that consumer engagement consequences include consumer loyalty and satisfaction, consumer empowerment, connection and emotional bonding, trust and commitment.

It is mostly recognized the importance of understanding the levels of consumer engagement. But it is essential to note that a consumer, depending on the context, can be a consumer, contributor and/or creator of brand-related content for the same brand concurrently or successively. Also, the same consumer can contribute to one brand but only consume content for another brand (Schivinski *et al*, 2016).

In the context of the present dissertation, it will be presented in detail the three levels of consumer engagement, considering the Schivinski *et al.* (2016) scale. Examples of the three levels can be seen in the following figure. Nonetheless, firstly it is important to clarify that brand related social media means both firm-created and user-generated media (Schivinski *et al.*, 2016).

Figure 2 - Continuum of three usage types – consuming, contributing and creating

COBRA type	Examples of brand-related social media use
Consuming	<ul style="list-style-type: none"> • Viewing brand-related video • Listening to brand-related audio • Watching brand-related pictures • Following threads on online brand community forums • Reading comments on brand profiles on social network sites • Reading product reviews • Playing branded online videogames • Downloading branded widgets • Sending branded virtual gifts/cards
Contributing	<ul style="list-style-type: none"> • Rating products and/or brands • Joining a brand profile on a social network site • Engaging in branded conversations, e.g. on online brand community forums or social network sites • Commenting on brand-related weblogs, video, audio, pictures, etc.
Creating	<ul style="list-style-type: none"> • Publishing a brand-related weblog • Uploading brand-related video, audio, pictures or images • Writing brand-related articles • Writing product reviews

Note: this list of examples of brand-related social media use is not exhaustive – COBRAs come in countless forms. The examples mentioned are both literature (e.g. Li & Bernoff 2008) and author generated.

Source: Muntinga *et al.* (2011, p.16)

3.1 Consumer's consumption of brand-related social media content

Consumer's consumption of brand related social media content represents the most frequent kind of online consumers brand related activity and it means the consumers' participation in networks and online brand communities (Schivinski *et al.*, 2016). A virtual brand community is an online community which is a specialized and non-geographically bound, based on social communications and relationships between a brand's consumers (Brodie *et al.*, 2013).

Consumer's consumption of brand related social media content involves a minimum level of engagement of the consumers who passively consume brand-related media without actively contributing (Muntinga *et al.*, 2011; Schivinski *et al.*, 2016).

Examples of this first level of brand related social: consulting product reviews, reading brand-related discussions on forums, and viewing brand-related videos (e.g. Bickart and Schindler, 2001; Hennig Thureau and Walsh, 2003, cited on Muntinga *et al.*, 2011).

3.2 Consumer's contribution to brand-related social media content

Subsequently, there is the middle level of brand-related activeness on social media. The middle level - Consumer's contribution to brand-related content – represents more engagement than consumption of brand-related content, it represents consumer-to-content and consumer-to-consumer interactions about brands (Muntinga *et al.*, 2011). This level does not include the creation of social media content but reflects consumers' contribution by participating in media previously created by a company or another consumer (Schivinski *et al.*, 2016).

Examples of this dimension of brand related social: conversations on social networking sites and comments on brand-related weblogs (Muntinga *et al.*, 2011).

3.3 Consumer's creation to brand-related social media content

The highest level - Consumer's creation of brand-related content – represents consumers who are actively producing and online publishing brand-related content, frequently with the contribution of other consumers (Muntinga *et al.*, 2011).

This dimension is the strongest level of online brand-related engagement (Schivinski *et al.*, 2016).

Examples of this dimension of brand related social: writing brand-related articles and posting product reviews (Muntinga *et al.*, 2011).

(H2: Consumer's consumption of brand related social media content positively influences Cognitive brand trust)

(H3: Consumer's consumption of brand related social media content positively influences Affective brand trust)

4. Insignia and national brands

The present section presents some literature review about insignia and national brands' specificities. Particularly, the discussion will be based, among others, on the differences between the two categories of brands and its evolution during the last decades.

Insignia brands have known in recent years an extraordinary development combined with an increasing market share, as a result of both economic crisis and a new consumer dynamic. Thus, competition between national and insignia brands become a hot topic for manufacturers and retailers (Brandão, 2014).

Insignia brand concept – also known as store brands, private brands, retailer brands, wholesale brands, and distributor's brands (Calvo-Porral *et al.*, 2016) – refers to products that are developed, managed and sold exclusively by retailers (Da Silva Borges *et al.*, 2016; Calvo-Porral *et al.*, 2016). Because of this unique specificity of insignia brands when compared to national brands, since national brands are available across different distribution formats, the choice of point of sale determines the brand's object of the purchase decision process and, consequently, the purchase made (Brandão, 2014).

Retailers can present insignia brand in various formats:

- (1) Umbrella brand: the studies agree that using an umbrella brand in the context of insignia brands has favourable impact for the retailer (Rubio *et al.*, 2017);
- (2) Umbrella label brand;
- (3) Brand not connected to the store name.

There have been a few trends such as higher store concentration, retailing internationalization, global recession, and changing consumer habits, which had triggered many retailing companies to have as a top priority the construction of strong insignia brands (Ailawadi and Keller, 2004). Calvo-Porral *et al.* (2016) resume some favourable consequences of retailers focus on creating and managing insignia brands: increasing customer loyalty, retailer performance, profit margins, and a high-value offering in the marketplace. Rubio *et al.* (2017) mention another benefit: the positive impact on retailers negotiating power.

Price is an essential element of the insignia brands value propositions. Customers perceive insignia brands as a convenient price, that offers a competitive price as an alternative to national brands (Calvo-Porrall *et al.*, 2016). As Brandão (2014) acknowledge, some consumers still have a stigma related to insignia brands value, mostly because there is an association of low-cost products with lower quality to them. Consumers perceive national brands as safest and with less quality variation than insignia brands (Rubio *et al.* 2014). The perceived risk is lower when the price is higher since consumers assume a linear relationship between price and quality. This triggers uncertainty about satisfaction levels and increases risk associated with the purchase of insignia brand products (Da Silva Borges *et al.*, 2016). Da Silva Borges (2016) provides evidence that supports the relationship between perceived risk and purchase intention in the matter of insignia brands. This study summarizes six different types of perceived risk described in the literature:

- (1) Financial risk: monetary loss triggered by the bad choice;
- (2) Social risk: customers believes that society could not accept their brand choice;
- (3) Physical risk: fear of health and physical damages;
- (4) Psychological risk: anticipation of a possible disappointment with the product bad quality;
- (5) Time risk: time lost related with the time speeded buying a bad quality product;
- (6) Performance risk: customer fear about the product performance being worse than what was promised by the brand.

It should be noted that previous literature identifies that insignia brands' competitiveness comes mainly from lower prices and less promotional expenses (Calvo-Porrall *et al.*, 2016) and not from low-cost products with lower quality. Typically, insignia brand products are 10% to 30% less expensive (Cardoso and Neves, 2008).

Cardoso and Neves (2008) explain how retailers achieve lower prices:

- (1) Retailers pay lower prices to manufacturers, once manufacturers use company inactive capacity to produce retailer's products. This way, there are no additional production costs for the manufacturers;
- (2) Retailers purchase to manufacturers in a wide scale, so they can negotiate better prices;
- (3) Insignia brand products are cheaper and easier to promote than national brand products, since retailers use strategically the available space in store;
- (4) Retailers do not have huge R&D costs as national brands do.

Consumer perceptions of insignia have been changing during the last few years (Rossi *et al.*, 2015). Recent literature notices that insignia brand products offer similar quality as national brand products (Rossi *et al.*, 2015; Calvo-Porrall *et al.*, 2016). Insignia brands usually offer a better price-quality relationship since they tend to attract a specific customer segment with an appropriate offer, price and packaging (Ailawadi and Keller, 2004). However, consumer acceptance of insignia brands products is rising across sociodemographic segments (Da Silva Borges *et al.*, 2016). Nowadays, insignia brand market has become more complex and has been not only growing in quality but also adopting different positions to serve different market segments (Rossi *et al.*, 2015). Retailers have already an array of insignia brand product, based on different market segmentation - e.g.: premium, first prices (Lucas, 2013). Rossi *et al.* (2015) cite previous literature that mentions that there are some premium insignia brand products with better quality than national brands.

Furthermore, market share of the insignia brand products is increasing and still has a great growing potential (Brandão, 2014) around the world, with significant market positions specifically in Europe and North America (Kumar and Steenkamp, 2007; Manzur, Olavarrieta, Hidalgo, Farías, and Uribe, 2011, cited on Calvo-Porrall *et al.*, 2016). The use of store brands in Europe was promoted by the economic recession (Rubio *et al.*, 2017).

Insignia brands are now consolidating their positions in the food sector, once they have been offering similar quality at lower prices comparing to national brands (Rubio *et al.*,

2014). However, Brandão (2014) acknowledge that insignia brands are not seen as trustworthy by the consumers. Thus, this dissertation addresses the question if, in the matter of brand trust in the baby food category, the proposed model shows or not invariance for two different groups surveys: insignia brand (Continente) and national brand (Nestlé).

II – Empirical Study

5. Methodology

Following the previous chapter with literature review, that provides to this study some theoretical knowledge, will be now presented the empirical study.

Firstly, it will be presented the research objectives and object of study. Then, it will be presented the proposed model, measurement scales, and the research hypotheses. Methodology' relevant considerations about the questionnaire such as latent variables, collection and processing of empirical data and sample characterization will then be explained more in detail. Finally, the technique used to analyse the data will be described.

Two software were used in this study: SPSS 24 and AMOS² 24.

5.1 Research questions

Recalling what has been previously said, this research aims to contribute to a better understanding of brand trust - Cognitive and Affective brand trust -, specifically the state of art and respective antecedents. More into detail, this study intends to empirically investigate Cognitive and Affective brand trust antecedents in the context of the baby category. Furthermore, the study intends to apply the brand trust model for an insignia and a national brand and, consequently, analyse the invariance between the two groups.

Thus, this investigation questions are:

- (I) How is Affective brand trust formed in the context of baby category?
- (II) Are there relevant differences between the model in the case of an insignia or a national brand?

The following sub-sections will provide important findings to the research objectives.

² Analysis of Moment Structure

5.2 Object of study

The choice of baby products category (babies up to two years) to develop this dissertation is mostly related to the specificities and particularities of it:

- (1) Trust in this category must be analysed keeping in mind non-consumers - i.e. customers who do not use the product category at all. Purchase decision is totally in the hands of adults - e.g.: parents - and the baby has no influence on it (Srivastava *et al.*, 2016),
- (2) A high inherent risk is attached to this category product (Srivastava *et al.*, 2016);
- (3) It is difficult for consumers - e.g.: parents - to judge the competency of this product category, because they do not use the product. The products are used by babies who are incapable to express their opinions about it (Srivastava *et al.*, 2016). A baby doesn't speak, so he/her can't express if a product is or is not appropriate for him/her.
- (4) The category is preferred by consumers during a specific period of time, so the customers intend to have only a short-term relationship (Aydin *et al.*, 2014).

The product chosen for this investigation is Fruit compotes. The product selected was based on two main informations:

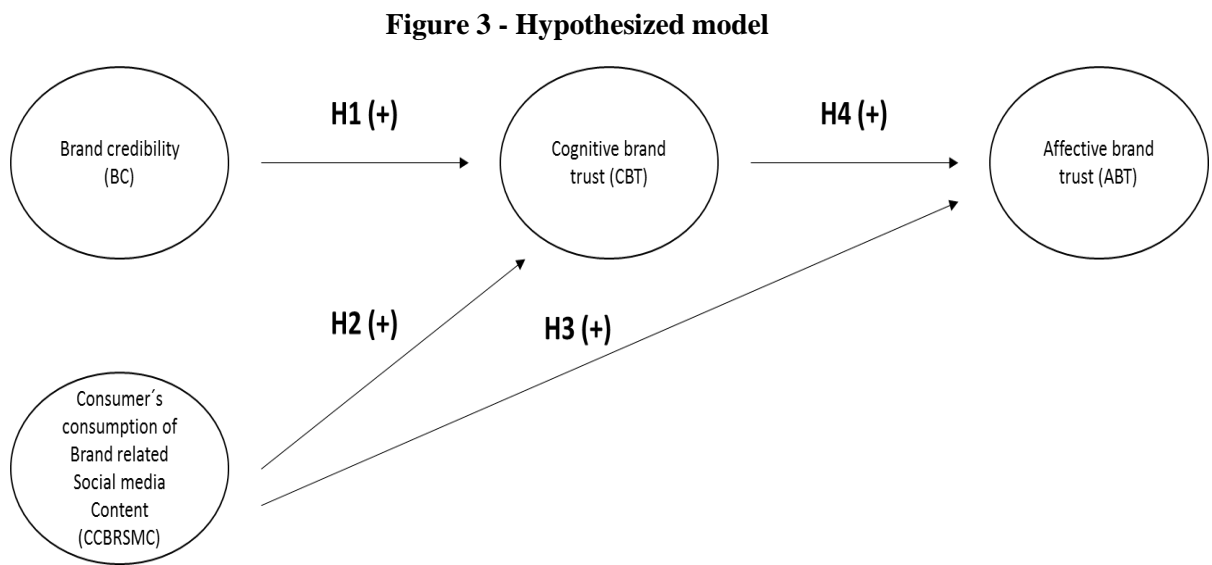
- (1) Srivastava *et al.* (2015) brand trust study suggests that studies could be conducted for other high perceived risk products or to other baby care products, such as food;
- (2) In the actual context, the convenience formats are crucial and consequently, Fruit compotes are recording significant dynamism and growth in the Portuguese market – 11% in value and 9% in volume (2016), as mention by Maria Ana Góis, Client Service Executive at Nielsen (in Grande Consumo, accessed in 1/04/2017).

The relevance of this study is highlighted because trust can take on extra importance in the context of baby care products (Aydin *et al.*, 2014). Brand trust construct has a central role in terms of the baby products (Brandão, 2014), once trust is related to reducing consumer uncertainty and consequently the effects of perceived risks (Delgado-Ballester

et al., 2003). To consumers is essential to feel secure about the product in the matter of baby care products.

5.3 Conceptual Model and research hypotheses

According to the study aim, it is proposed a model to explain the consumer behaviour. Figure 3 illustrates the proposed model and its research hypotheses. The proposed model is new, allowing a new approach.



Source: own elaboration

To a better interpretation of the proposed model, Table 2 presents same central definitions, based in the previous Literature review Chapter.

Table 2 - Conceptual Model' definitions

Model / Variable	Definition
Proposed model	The proposed model intends to measure Affective brand trust through Cognitive brand trust which is the moderate variable in this model, and Brand credibility and Consumer's consumption of brand-related social media content, which are the starting point of the proposed model. The proposed model is new, allowing a new approach.

Affective brand trust	Affective brand trust reflects the consumer perceived strength of the consumer-brand relationship (Johnson and Grayson, 2005). It designates confidence based on the level of care and concern exhibited by the brand (Srivastava <i>et al.</i> , 2016).
Cognitive brand trust	Cognitive brand trust emerges from an accumulated knowledge that allows customers to make predictions, with a certain level of confidence, and also allows them to build confidence that the brand will meet its obligations (Johnson and Grayson, 2005).
Brand credibility	Brand credibility is defined by Erdem <i>et al.</i> (2006, p.191) as the “believability of the product information contained in the brand, which requires that consumers perceive that the brand has the ability and willingness to continuously deliver what is promised”
Consumer’s consumption of brand-related social media content	Consumer’s consumption of brand related social media content represents the most frequent kind of online consumers brand related activity. Involves a minimum level of engagement of the consumers who passively consume brand-related media without actively contributing (Schivinski <i>et al.</i> , 2016)

Source: own elaboration

In Table 3, the hypotheses of investigation will be summarized. They are theoretically explained in detail in the Literature review chapter.

Table 3 - Summary of hypotheses of investigation

<p>H1: Brand credibility positively influences Cognitive brand trust.</p> <p>H2: Consumer’s consumption of brand related social media content positively influences Cognitive brand trust.</p> <p>H3: Consumer’s consumption of brand related social media content positively influences Affective brand trust.</p> <p>H4: Cognitive brand trust positively influences Affective brand trust.</p>

Source: adapted from Srivastava *et al.* (2016) and Schivinski *et al.* (2016)

5.4 Methodology' relevant considerations

5.4.1 Questionnaire

To validate the hypotheses of investigation, it was conducted an online questionnaire, which will be explained detailly through this section.

This study intends to apply a quantitative methodology to address the research question. The primary data was obtained using online questionnaires, which are available for consultation in Annex A. The data collection tool was built using a personal installation of the *LimeSurvey* software platform. The study population was Portuguese consumers who purchase fruit compotes for babies up to two years (Madeira and Açores were not included). Online surveys were published directly to consumers, through FEP dynamic email, Facebook Social Network, and a blog during the period between 10 of June of 2017 and 4 of July of 2017.

There are two different surveys, applied to two different brands:

- (a) Insignia brand: Fruit compotes Continente
- (b) National brand: NATURNES Fruit compotes Nestlé

The disseminated link redirect for each brand's survey on an alternative basis. However, each respondent was asked to respond for the same questions (the only difference was the precisely brand).

The questionnaire has been prefaced by an explanation and the goal of the study was revealed in the title. All the survey questions were closed and mandatory questions. Regarding the measurement of constructs, this study opted for the use of previously developed and tested scales and the last page of the survey was built to understand the respondent profile through some sociodemographic variables: gender, age, education level, household's net monthly income and Portuguese district of residence. The questionnaire was conducted in Portuguese, so the scales were previously translated in the best way possible to retain their original context and meaning.

Before being launched directly to the consumer, the survey was submitted to a pre-test with 15 respondents who purchase fruit compotes for babies. The pre-test had the main goal to analyse if the questions were clear and identify possible mistakes. Consequently, some structural improvements were made.

This quantitative (extensive) research intends to produce statistical data regarding the hypotheses designed having as starting point the theory. This research methodology is a more objectivist approach to Social Science (Bahari, 2010).

The survey tool is one of the most popular techniques for data gathering in the context of a quantitative (extensive) research. Spread surveys online present a set of benefits: access to a large population of individuals despite their geographic location; savings in both time and money; present survey information in formats that were previously difficult to achieve (Schmidt, 1997). With the exponential impact of social networks nowadays, it is also easier to share the surveys.

5.4.2 Latent variables

For the present study are being considered the following latent variables: Cognitive brand trust, Affective brand trust, Brand credibility, and Consumer's Consumption of brand-related social media content.

Latent variables, also known as constructs, are concepts that are not directly observable. Latent variables can be explained using observable variables (Marôco, 2010). Other latent variables examples: intelligence and social capital.

The latent variables presented correspond to the items described in the following table.

Table 4 - Latent variables

Construct	Items	Author(s)
Cognitive brand trust	<p>CBT_1: I can confidently depend on this brand since it does not adversely affect my baby by functioning carelessly</p> <p>CBT_2: Given by this brand's past record, I see no reason to doubt its competence</p> <p>CBT_3: Given by this brand's past record, I have strong reason to doubt its effectiveness*</p>	Srivastava <i>et al.</i> (2016)
Affective brand trust	<p>ABT_1: This brand is only interested in selling products*</p> <p>ABT_2: Brand displays a warm and caring attitude towards baby</p> <p>ABT_3: I would feel a sense of personal loss, if I could no longer use this brand</p> <p>ABT_4: I feel brand would respond caringly, if I face problem with the product</p>	Srivastava <i>et al.</i> (2016)
Brand credibility	<p>BC_1: This brand reminds me of someone who is competent and knows what he /she is doing</p> <p>BC_2: This brand has the ability to deliver what it promises</p> <p>BC_3: This brand's product claims are believable</p> <p>BC_4: This brand has a name you can trust</p> <p>BC_5: This brand does not pretend to be something it is not</p>	Srivastava <i>et al.</i> (2016)

Consumer's consumption of brand-related social media content	<p>CONS_1: I read posts related to brand [X] on social media</p> <p>CONS_2: I read fan page (s) related to brand [X] on social network sites</p> <p>CONS_3: I watch pictures/graphics related to brand [X]</p> <p>CONS_4: I follow blogs related to brand [X]</p> <p>CONS_5: I follow brand [X] on social network sites</p>	Schivinski <i>et al.</i> (2016)
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Source: own elaboration

Notes:

[X] is a brand name.

*The Likert scale was inverted for this item.

Table 5 - Descriptive statistics

	Mean			Median			Mode			Std. Deviation		
	Total	CNT	N	Total	CNT	N	Total	CNT	N	Total	CNT	N
Cognitive brand trust												
CBT_1	5,50	5,40	5,60	6	6	6	7	7	7	1,64	1,66	1,62
CBT_2	5,53	5,36	5,72	6	6	6	6	6	6	1,41	1,47	1,33
CBT_3	5,62	5,51	5,75	6	6	6	7	7	7	1,70	1,77	1,60
Affective brand trust												
ABT_1	4,28	4,53	4,00	4	5	4	5	5	3a	1,87	1,78	1,94
ABT_2	5,38	5,21	5,56	5	5	6	5	5	6	1,30	1,37	1,20
ABT_3	3,52	3,15	3,94	3	3	4	1	1	4	1,99	2,01	1,90
ABT_4	5,21	5,03	5,41	5	5	6	5 ^a	5	7	1,51	1,57	1,41
Brand credibility												
BC_1	5,49	5,34	5,65	6	6	6	6	6	6	1,31	1,34	1,25
BC_2	5,38	5,22	5,57	6	5	6	6	6	6	1,27	1,36	1,14
BC_3	5,33	5,21	5,47	5	5	6	6	5	6	1,29	1,30	1,28
BC_4	5,51	5,30	5,74	6	5	6	7	4	7	1,33	1,34	1,29
BC_5	5,24	5,10	5,40	5	5	5	5	4	5	1,44	1,52	1,34

Consumer's consumption of brand-related social media content												
CONS_1	4,19	4,39	3,96	4	5	4	4 ^a	6	4	1,95	1,93	1,95
CONS_2	3,19	3,31	3,05	3	3	3	1	1	1	1,94	1,93	1,96
CONS_3	3,81	3,92	3,68	4	4	4	1 ^a	5	1	1,96	1,93	2,00
CONS_4	2,91	2,97	2,84	2	3	2	1	1	1	1,97	1,85	2,12
CONS_5	3,09	3,22	2,95	2	3	2	1	1	1	2,04	1,95	2,12

Source: own elaboration on SPSS

Legend: CNT – Continente; N – Nestlé.

In all the items (questions) the answers options are between 1 and 7. Regarding Cognitive brand trust and Brand credibility, most of the answers are superior to 4. Regarding Affective brand trust, there is only one question with mean inferior to 4: ABT_3: However, the mean is 3,52, which is approximately 4. Regarding Consumption of brand-related social media content, only one question out of 5 has a mean superior to 4.

5.4.3 Measurement Scales

As described in a previous section, regarding the measurement of constructs, this study opted for the use of previously developed and tested scales. These scales were theoretically supported and previously tested in other scientific studies.

A 7-points Likert scale was applied to all the constructs analysed to ensure uniformity of scales. The respondents could select from (1) “Strongly disagree” to (7) “Strongly agree” and “I don’t know / not applicable”. This scale is the most usual in marketing studies since it presents a set of benefits: it is easy to build and to manage and allows to respondents an easy comprehension and simple answer (Matell and Jacoby, 1971). A 7-points Likert scale provides more information given its degree of approval/disapproval.

Table 6 - Cronbach Alfa

Latent variables	# Items	α Cronbach
Cognitive brand trust	3	0,780
Affective brand trust	4	0,728
Brand credibility	5	0,931

Consumer's consumption of brand-related social media content	5	0,929
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Source: own elaboration on SPSS

To properly analyse the scales of measure - explained in detail in the previous section, Table 4 - it is necessary to validate their internal reliability/consistency. Therefore, it was made the Cronbach's alpha test. Internal consistency designates the extent to which all the items in a test measure the same construct. Cronbach's alpha reliability coefficient normally ranges between 0 and 1: if all the scale items are entirely independent of one another (i.e., are not correlated or share no covariance), then $\alpha = 0$; and, if all the items have high covariances, then α will approach 1. There are different reports about the acceptable values of alpha (α), but it is commonly accepted that the minimum value for α should be 0.7. However, sometimes in the context of the social sciences, it is acceptable a $\alpha=0.6$. It should be interpreted with caution. Internal consistency also estimates the reliability of an instrument (Marôco and Garcia-Maques, 2006).

As it could be analysed from the Table 6, all the constructs are above the recommendable minimum value.

5.4.4 Data collection and sample characterization

Once the objectives of the study are settled, and the latent variables and scales are presented, it is essential to define the sample of the study.

Regarding to data collection, the survey was disseminated online in order to reach as many fruit compotes for babies' buyers as possible and, consequently, as many respondents as possible in Portugal Continental. To improve the effectiveness of the data collection, Facebook groups of parents were contacted to disseminate the survey. The groups that disseminated the surveys were: "Mães de 2017 e 2018 Portugal"; "Pais e Mães de 2017 Portugal"; "Bazar de vendas das mamãs e dos papás"; "Dúvidas Mães e Bebés"; "Desabafos mamãs e papás de portugal"; "Mães Julho e Agosto - 2017 Portugal"; "Mães e Mulheres". Additionally, it was disseminated at the Facebook page "Mães com

Pinta” and at the blog “De Mãe para Mãe”. Also, Nestlé was contacted via messages in Facebook, however, because of their internal policies and the number of similar requests, the answers were negative.

Hence, a nonprobability approach was adopted to reach “hidden populations” (Heckathorn, 2010):

- (1) Convenience sample – firstly, the respondents were chosen based on the following logic: friends, friends of friends, etc;
- (2) Snowball – secondly, in addition, the respondents of the convenience samples were asked to spread the survey to other people. The idea is those people continuously spread the survey to fruit compote for babies’ buyers, consequently creating a snowball effect.

Additionally, the survey was sent via University of Oporto dynamic email, posted on Facebook’ profile by friends and posted on a Facebook event created for this propose.

As mention before, the disseminated link redirect for each group of surveys (insignia brand and national brand) on an alternative basis. Thus, the sample of this study contains 274 complete responses, after eliminating respondents with less than 18 years and respondents who choose “I don’t know / not applicable”. It was considered the right action, in order to ensure the quality of the data. Thus, the sample has 145 (52,9%) responses regarding the insignia brand Continente, and 129 (41,1%) responses regarding the national brand Nestlé. Some studies propose minimum sample sizes. “Researcher generally would not factor analyse sample of fewer than 50 observations, and preferably the sample size should be 100 or larger. As a general rule, the minimum is to have at least five times as many observations the number of variables (Hair Jr. *et al.*, 2010). Accordingly, the sample size is totally adequate for the present empirical study.

Table 7 - Social demographic variables analysis

	Number	%
Gender		
Female	189	69
Male	85	31
Age		
<18	0	0
18 to 25	68	24,8
26 to 35	95	34,7
36 to 45	44	16,1
46 to 55	40	14,6
56 to 65	25	9,1
> 65	2	0,7
Household's net monthly income		
≤1000€	66	24,1
1001 to 2000€	114	41,6
2001 to 3000€	67	24,5
>3000€	27	9,9
Educational level		
Primary and secondary school	9	3,3
High school	69	25,2
Bachelor degree	132	48,2
Master	63	23
PhD	1	0,4
District		
Aveiro	26	9,5
Braga	48	17,5
Coimbra	18	6,6
Faro	1	0,4
Guarda	12	4,4
Leiria	4	1,5
Lisboa	22	8,0
Porto	72	26,3
Santarém	7	2,6
Setúbal	2	0,7
Vila Real	1	0,4
Viseu	61	22,3

Source: own elaboration on SPSS

Most of the respondents are female (69%) and this number is probably related to the fact that, in Portugal, are frequently mothers who take care of family feed, and also because

most of the Facebook groups, the Facebook page and the blog that disseminated the questionnaire have as a target the mothers. 34,7% of the respondents are between 26 and 35 years old, followed by 24,8% of the respondents between 18 and 25 years old. This range of ages makes sense in the context of the present study. Regarding Household's net income, 41,6% of the respondents have 1001 a 2000€ for a month, 24,5% have 2001 to 3000€ month and 24,1% less than 1000€. 48,2% of the respondents have a Bachelor degree, 25,2% high school education and 23% have a master degree. Relating to demographic location, most of the respondents are from Porto (26,3%), Viseu (22,3%) and Braga (17,5%).

5.5 Structural Equation Modelling

Structural Equation Modelling (SEM) is a general modeling framework used to test the validity of theorist models – which define relationships between variables - and test consequently their hypotheses using data gathered (Marôco, 2010).

SEM permits separate relationship for each of a set of dependent variables. It provides the appropriate and most efficient estimation technique for a series of separate multi regression equations estimated at the same time (Hair Jr. *et al.*, 2010). Hair Jr. *et al.* (2010, p.634)) also mention that SEM is “a family of statistical models that seek to explain the relationships among multiple variables”.

Constructs, also known as latent variables, are variables that cannot be explained by themselves. They are unobserved variables, so they only can be explained by observable variables. Although, observable variables are directly measured (items of a scale). Hence, latent variables are measured by observable variables that can be collected by surveys, tests, among others (Hair Jr. *et al.*, 2010; Marôco, 2010).

Thus, the use of SEM is commonly justified in the social sciences because of its ability to impute relationships between unobserved constructs from observable variables – this means, it analysis the impact between variables.

5.5.1 Factorial analysis

Factor analysis is a statistical technique used to explain the interrelationships between a large number of variables. This technique aims to reduce a large number of observed variables to a few factors, with minimal loss of information (Hair Jr. *et al.*, 2010).

There are two main types of Factorial Analysis: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

Exploratory factor analysis

Hair Jr. *et al.* (2010, p.693) provide the following definition of EFA: “EFA explores the data and provides the researcher with information about how many factors are needed to best represent the data”.

In the context of the present study, to proceed with EFA, an extraction method was used: Principal Component Analysis - after grouping similar items of a common variable, or which of the observed variables are influenced by specific latent variables, this method finds structural patterns (Marôco, 2010). However, before conducting the process of factorial analysis, it is necessary to understand if the data is suitable for the analysis. It can be made using Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. KMO indicates which components to use, that is, the appropriateness of factor analysis (Marôco, 2010). KMO returns values between 0 and 1. The sample is suitable if the number is between 0.5 and 1 (Silva, 2006). Bartlett's Test of Sphericity statistically tests the presence of correlations among variables (Hair Jr. *et al.*, 2010).

After all, the principal components should be analysed taking into consideration factors loading higher than 0.5 (each item). Factor loading is the correlation between the original variables and the factors, and it is crucial to understand the nature of a particular factor (Hair Jr. *et al.*, 2010).

Confirmatory factor analysis

Afterwards running the Exploratory Factor Analysis, it is necessary to confirm the obtained results through the Confirmatory Factor Analysis.

Marôco (2010, p. 172) provides the following explanation: “CFA is used to evaluate the quality of fit of a theoretical measurement model to the correlational structure observed between the manifest variables (items)”. This is, a confirmatory structural model specifies the causal relations of the constructs to one another, as suggested by theory. In CFA, it can be assessed the contribution of each scale item and how well the scale measures the concept (Hair Jr. *et al.*, 2010).

This is made by evaluating the reliability and validity of the scale. Validity is related with how well the concept is defined by the measure(s), while reliability relays to the consistency of measure(s) (Hair Jr. *et al.*, 2010).

Regarding reliability, it is explained by the Construct Reliability (CR) that represents “the measure of reliability and internal consistency of the measured variables representing a latent construct” (Hair Jr. *et al.*, 2010, p.689). The value should be superior to 0.7 (Marôco, 2010). Concerning validity, there are several types of validity, but this study focusses on convergent validity and discriminant validity.

Convergent validity is the degree to which the scale indeed measures what it is made-up to measure (Marôco, 2010). Convergent validity is recognized when there are positive and high correlations between the items of a given construct. This measure of consistency is composed by Construct Reliability (CR) and Average Variance Extracted (AVE) (Marôco, 2010). CR must be higher than AVE and AVE must be superior to 0,5 (Hair Jr. *et al.*, 2010).

Discriminant validity is the degree to which two conceptually similar concepts are distinct (Hair Jr. *et al.*, 2010). This means, discriminant validity demonstrates how much a construct is different from the other constructs, that it is not correlated with them, measuring different factors of them. If the root square of AVE is higher than the

correlations of the given construct, we are in presence of discriminant validity (Marôco, 2010).

6. Results

Subsequently, the results of this research will be presented as well as the hypotheses analysis.

6.1 Conceptual Model

As mentioned in the previous chapter, the conceptual model is based on the following constructs: Cognitive brand trust, Affective brand trust, Brand credibility, and Consumer's Consumption of brand-related social media content.

6.1.1 Measurement Model

In the aftermath of knowing the sample and the questions in the study, it is necessary to develop its factorial analysis. Nonetheless, before conducting the process of factorial analysis, it is essential to understand if the data is suitable for the analysis.

Table 8 - KMO and Bartlett's Test

		Cognitive brand trust	Affective brand trust	Brand credibility	CCBRSMC
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,580395	0,661156	0,888850	0,861217
Bartlett's Test of Sphericity	Approx. Chi-Square	341,101257	423,055903	1171,03028	1156,42809
	gl	3	6	10	10
	Sig.	,000	,000	,000	,000

Source: own elaboration on SPSS

Kaiser-Meyer-Olkin (KMO) test is a measure of how the data is suitable. It indicates which components to use, that is, the appropriateness of factor analysis (Marôco, 2010). KMO returns values between 0 and 1. The sample is suitable if the number is between 0.5 and 1 (Silva, 2006). As can be concluded from the previous table, the numbers are positives.

Bartlett's Test of Sphericity tests the presence of correlations among variables (Hair Jr. *et al.*, 2010). Bartlett's Test of Sphericity shows that this analysis is statistically significant ($p=0,000$). So, the analysis can proceed.

To evaluate the variables in the study, it was also conducted a communalities analysis (which is available for a consult in Annex B). It is possible to conclude that there are high item communalities, except in the case of CBT_2 (0,441) and ABT_1 (0,236). However, due to the quality relevance of Cognitive and Affective brand trust constructs, the items will not be eliminated for now. However, in the following tests it is essential to keep extra attention to these items.

The constructs also show a high percentage of Total Variance Explained (above 59,5%) and the one-dimensionality of the constructs is assured – more detail about this analysis is available for a consult in Annex B.

Table 9 - Exploratory Factorial Analysis - Principal Component Analysis

	Cognitive brand trust	Affective brand trust	Brand credibility	CCBRSM
CBT_1	0,928			
CBT_2	0,664			
CBT_3	0,889			
ABT_1		0,486		
ABT_2		0,871		
ABT_3		0,754		
ABT_4		0,905		
BC_1			0,905	
BC_2			0,903	
BC_3			0,919	
BC_4			0,915	
BC_5			0,798	
CONS_1				0,801
CONS_2				0,927
CONS_3				0,890
CONS_4				0,889
CONS_5				0,906

Source: own elaboration on SPSS

As it can be seen in the previous table, factor loadings are superior to 0,5, which is a positive number. The exception is the ABT_1 item that has 0,486 of factor loading.

Afterwards running the Exploratory Factor Analysis, it is necessary to confirm the results through the Confirmatory Factor Analysis. As described in the Methodology Chapter, it is now required to analyse Construct Reliability (CR) and Average Variance Extracted (AVE). Reliability and validity of the scales must be assured.

Table 10 - Construct Reliability (CR) and Average Variance Extracted (AVE)

	Cognitive brand trust	Affective brand trust	Brand credibility	CCBRSM
AVE	0,697	0,595	0,791	0,781
CR	0,871	0,849	0,950	0,947

Source: own elaboration on SPSS

It can be concluded that all the constructs have an AVE superior to 0.6, which is a positive number since AVE should be superior to 0.5 (Marôco, 2010). Regarding CR, the value for each construct should be higher than the AVE value to validate the convergence. Also, CR value should be superior to 0.7 (Marôco, 2010), which all the constructs have.

In conclusion, there are reliability and convergent validity, and there are positive and high correlations between the items of the constructs (Marôco, 2010).

Table 11 - Correlations matrix

	Cognitive brand trust	Affective brand trust	Brand credibility	CCBRSM
Cognitive brand trust	0,835			

Affective brand trust	0,333	0,772		
Brand credibility	0,426	0,762	0,889	
CCBRSM	0,020	0,431	0,383	0,884

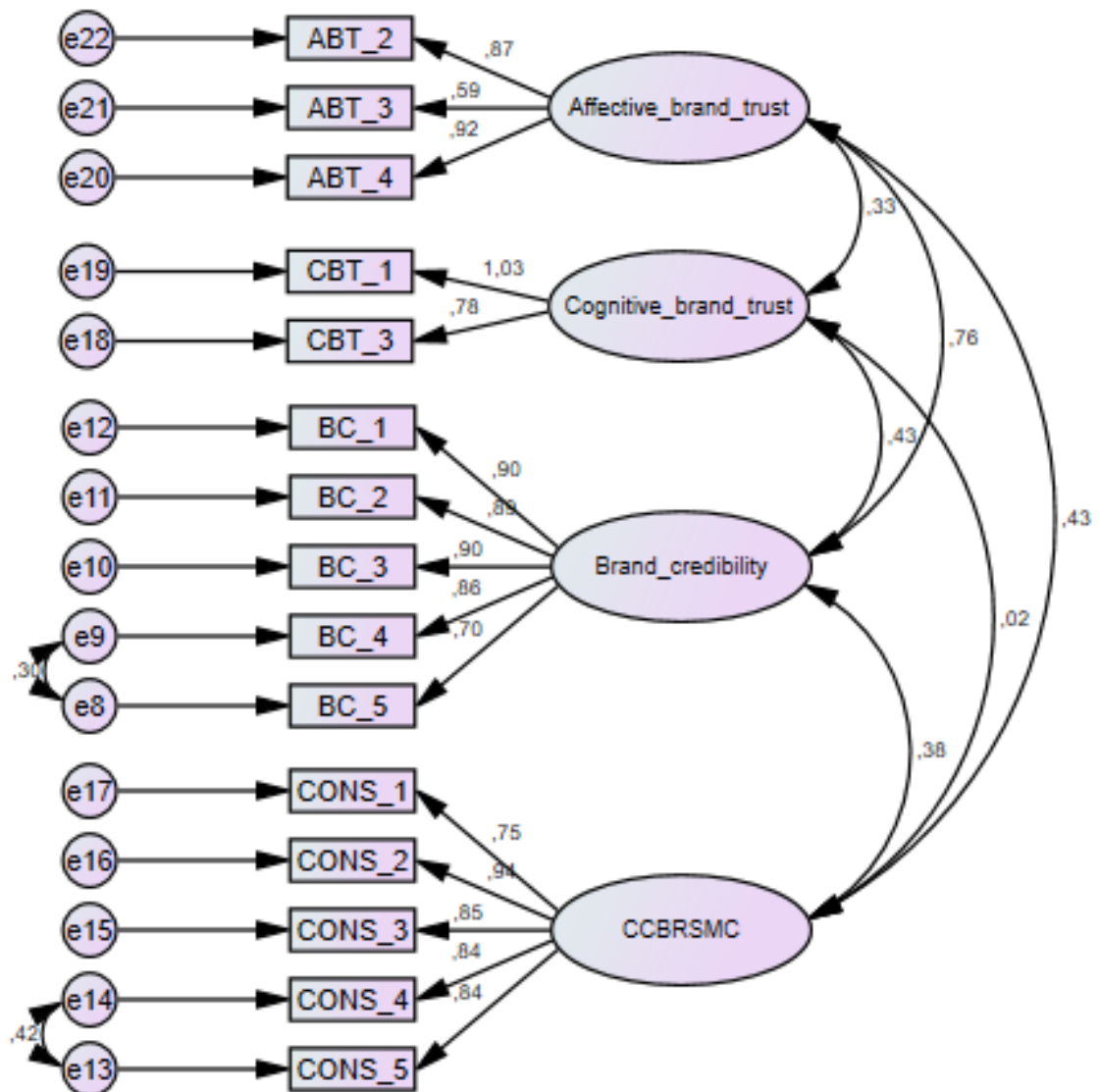
Source: own elaboration on SPSS

In addition, the discriminant validity should be analysed according to the previous table. In the diagonal, it is presented the square root of AVE values. Since the square root of AVE is higher than the correlations of each construct, we are in presence of discriminant validity. This means that each latent variable is explained by their items, and not for other latent variables items.

After all, it is now possible to affirm that all constructs have both convergent and discriminant validity.

Afterwards, the Measurement Model is presented. It involves four latent variables.

Figure 4 - Measurement Model



Source: own elaboration on AMOS

Some adjustments to the model were made, to improve model fit:

- (1) ABT_1 (factor loading 3,17) and CBT_2 (factor loading 4,89) were eliminated.
This was already expected, due to the communalities results for these two items.
- (2) Two covariances between errors were established (modification indices higher than 19).

6.1.2 Structural Model

Table 12 presents the most common indexes used to measure the goodness of fit of the model and the respective results of this study.

Model fit “compares the theory to reality by assessing the similarity of the estimated covariance matrix (theory) to reality (the observed covariance matrix)” (Hair Jr. *et al.*, 2010).

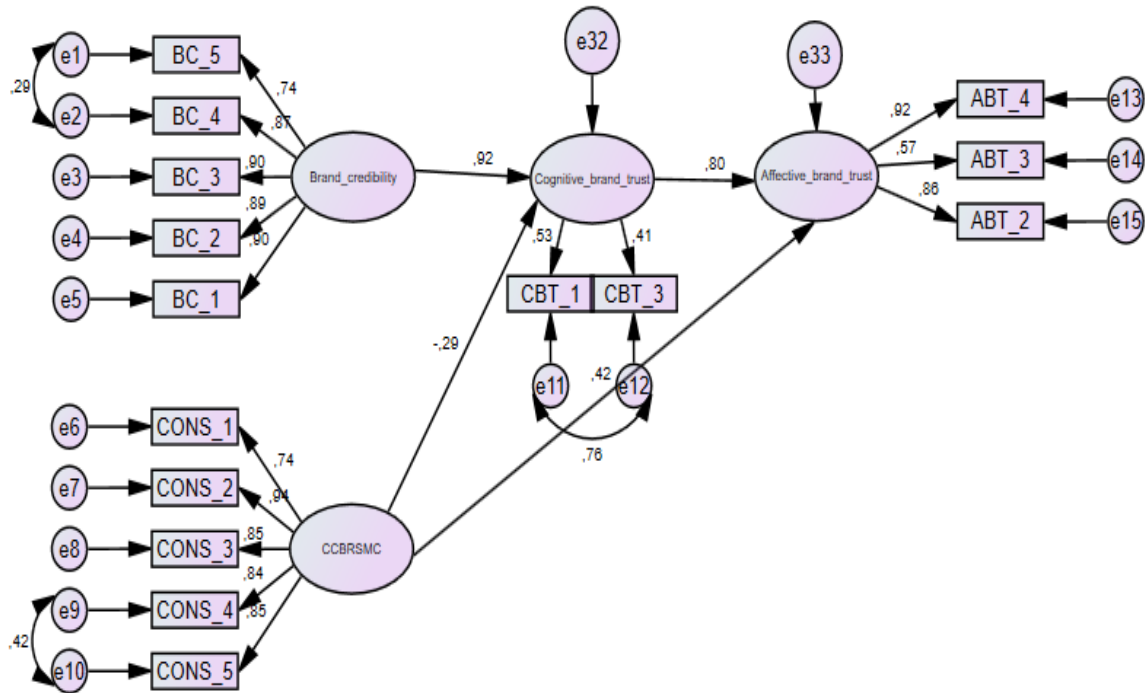
Table 12 - Statistics and indexes of goodness of fit of the models

Statistics	Reference	Index model fit – Measurement Model	Index model fit – Structural Model
χ^2/df	> 5 – Bad Adjustment [2; 5] – Tolerable Adjustment [1; 2] – Good Adjustment ~1 – Very Good Adjustment	2,262	2,719
CFI	< 0.8 – Bad Adjustment	,969	,957
TLI	[0,8; 0,9] – Tolerable Adjustment	,961	,946
NFI	[0,9; 0,95] – Good Adjustment ≥ 0,95 – Very Good Adjustment	,946	,934
RMSEA	> 0.10 – Unacceptable Adjustment [0,05; 0,10] – Tolerable Adjustment ≤ 0,05 – Good Adjustment	,068	,079

Source: Adapted from Marôco (2010) and AMOS Output

As it is possible to perceive, χ^2/df and RMSEA indexes demonstrate tolerable adjustment for both Measurement model and Structural model. CFI demonstrates very good adjustment for both Measurement model and Structural model. TLI demonstrates a very good adjustment for the Measurement model and a good adjustment for the Structural model. NFI demonstrates a good adjustment for both Measurement model and Structural model.

Figure 5 - Structural model (AMOS Standardized Estimates)



Source: own elaboration on AMOS

The structural model shows a good loading on the relation between Brand credibility and Cognitive brand trust (0,92), between CCBRS MC and Affective brand trust (0,76) and between Cognitive brand trust and Affective brand trust (0,80). However, there is a low and negative loading for the relation between CCBRS MC and Cognitive brand trust. This low value is not totally unexpected since literature doesn't provide any specific information about this direct relation.

Nevertheless, some attempts were made to increase these loadings. Several alternative models were tested with all the possible relations. Yet, the best indexes were the ones of the proposed model.

6.1.3 Hypotheses Testing

The validation of the hypotheses is made through SEM. It was made a factorial analysis that proved the convergent and discriminant validity of the constructs, which means that is possible to proceed with all of them in the model.

Table 13 - Standardized Total Effects (Direct + Indirect)

	Cognitive brand trust	Affective brand trust	Brand credibility	CCBRSM
Cognitive brand trust	,000	,000	,916	-,292
Affective brand trust	,796	,000	,729	,187

Source: own elaboration on AMOS

The standardized total effects allow understanding the impact of each variable on the others. Thus, it is possible to affirm that Brand credibility is the construct with more impact on Cognitive brand trust, and Cognitive brand trust is the construct with more impact on Affective brand trust, immediately followed by Brand credibility (see Table 13).

Table 14 - SEM Model Estimates

	Estimates ³	p-value	Conclusion
H1: Brand credibility positively influences Cognitive brand trust.	,565	***	Confirmed
H2: Consumer's consumption of brand related social media content positively influences Cognitive brand trust.	-,118	,007	Not confirmed
H3: Consumer's consumption of brand related social media content positively influences Affective brand trust.	,264	***	Confirmed
H4: Cognitive brand trust positively influences Affective brand trust.	1,235	***	Confirmed

Source: own elaboration on AMOS

Legend: *** means approximately zero

³ E.g.: When Brand credibility goes up by 1, Cognitive brand trust goes up by ,565.

Table 14 provides information concerning the validation of H1, H3 and H4, since p -value $< 0,001$. Also, the table shows that the positive relation between CCBRS MC and Cognitive brand trust is not confirmed (p -value = ,007). This was already expected since literature does not prove this relationship.

6.1.4 Multi group analysis

In this section, it will be conducted a multi group analysis to understand the impact of the insignia brand (Continente) responses and national brand (Nestlé) responses.

“The Multi group Confirmatory Factor Analysis (MGCFA) is a structural equation modelling technique which evaluates to what extent the configuration and the parameters of a psychometric instrument are invariant (equivalent) in several groups.” (Damásio, 2013, p.211). It consists on split the groups, this means, the initial sample is divided into two subgroups (Srivastava *et al.*, 2016).

Thus, the sample was split into two groups: Continente and Nestlé. The analysis starts with the estimation of four models:

M0 - Unconstrained model – without constraints (equal form).

M1 - Measurement weights – equal factor loadings.

M2 - Structural Covariances – equal covariance weights.

M3 - Measurement Residuals – equal weights, covariances, and residuals.

Table 15 - Multigroup Invariance analysis

	CMIN	DF	χ^2 / DF	CFI	RMSEA	PCLOSE	ΔDF	$\Delta \chi^2 / DF$	ΔCFI
M0	384,789	166	2,318	,936	,070	,000	-	-	-
M1	401,972	177	2,271	,934	,068	,000	11	-0,047	-,002
M2	410,174	183	2,241	,934	,068	,001	17	-0,077	-,002
M3	445,714	203	2,196	,929	,066	,001	37	-0,122	-0,07

Source: own elaboration on AMOS

Configural invariance – “Both groups associate the same subsets of items with the same constructs” (Cheung and Rensvold, 2002, p.236).

The first step is to analyse configural invariance, that is the initial model (M0), and, because of that, it cannot be compared to any other previous model. Thus, it should be evaluated through some fit indexes (Damásio, 2013).

χ^2 and RMSEA demonstrate a tolerable adjustment and CFI demonstrates a very good adjustment. As the indexes are adequate, the plausibility of the model suggests that the configuration proposed is plausible for both groups (Damásio, 2013).

Metric invariance – “Overall, the strength of the relationships between items and their underlying constructs are the same for both groups” (Cheung and Rensvold, 2002, p.236).

As it can be seen in Table 15, M1 presents $\Delta \chi^2 = -0,047$. The difference is statistically significant if $\Delta \chi^2 < 0,05$ (Damásio, 2013). So, to this model, the difference is statistically significant. It suggests that invariance assumption is not accepted, so the parameter in evaluation is different between groups (Brown, 2006; Steiger, Shapiro and Browne, 1985; cited on Damásio, 2013).

Although, as Damásio (2013) acknowledge, researchers have demonstrated that differences in X^2 are also dependent on sample size. So, CFI will also be analysed.

The model should not present $\Delta CFI > 0,01$ when compared to the previous model (Cheung and Rensvold, 2002). For M1, $\Delta CFI = -0,002$, so it can be assumed metric invariance.

According to Byrne (2010) is not unexpected, given its statistical stringency, that the χ^2 difference test argues for evidence of noninvariance, while the CFI difference test argues for invariance. In this situation, the same author says that the decision “of which one to accept is purely an arbitrary one and rests solely with each individual researcher”.

Thus, in the context of this dissertation, metric invariance will not be accepted. Consequently, scalar invariance cannot be tested (Damásio, 2013).

Once determined evidence of noninvariance when all factor loadings are held equal across groups, the next step is to test the invariance of factor loadings relative to each item separately (Byrne, 2010). To do so, the estimation of the following models was conducted. Then, Table 16 shows the comparison of each model with M0 (Unconstrained model – without constraints).

M1.1 - Measurement weights: Factor loadings for only Brand credibility (BC) constrained equal.

M1.2 - Measurement weights: Factor loadings for only Consumer's consumption of brand related social media content (CCBRSMC) constrained equal.

M1.3 – Measurement weights: Factor loadings for only Cognitive brand trust (CBT) constrained equal.

M1.4 – Measurement weights: Factor loadings for only Affective brand trust (ABT) constrained equal.

Table 16 - Multigroup Invariance analysis (invariance of factor loadings relative to each construct)

	χ^2	DF	$\Delta \chi^2$	ΔDF	Statistical significance	CFI	ΔCFI	Conclusion
M0	384,789	166	-	-	-	,936	-	-
M1.1	394,394	170	9,605	4	0,048	,934	-0,002	noninvariant
M1.2	385,262	170	0,473	4	0,976	,937	0,001	invariant
M1.3	391,724	167	6,935	1	0,008	,934	-0,002	noninvariant
M1.4	385,028	168	0,239	2	0,887	,936	0,000	invariant
BC_1	384,796	167	0,007	1	0,933	,936	0	invariant
BC_2	385,948	167	1,159	1	0,282	,936	0	invariant
BC_3	384,812	167	0,023	1	0,879	,936	0	invariant
BC_4	385,852	167	1,063	1	0,303	,936	0	invariant
BC_5	384,796	167	0,007	1	0,933	,936	0	invariant
CBT_1	391,724	167	6,935	1	0,008	,934	-0,002	noninvariant

CBT_3	391,724	167	6,935	1	0,008	,934	-0,002	noninvariant
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Source: own elaboration on AMOS

Table 16 shows that the noninvariance has its roots on Brand credibility and Cognitive brand trust constructs. For this reason, the analyse of these constructs proceeded more into detail, so, consequently, it was tested the invariance of factor loadings relative to items.

Thus, concerning Cognitive brand trust none of the two constructs show invariance, and they present the same values. Regarding Brand credibility, none of the five constructs shows noninvariance individually. For this reason, the analysis was conduct grouping items (see Table 17).

Table 17 - Multigroup Invariance analysis (invariance of factor loadings relative to Brand credibility)

	χ^2	DF	$\Delta \chi^2$	ΔDF	Statistical significance	CFI	ΔCFI	Conclusion
BC_1 BC_2	388,508	168	3,719	2	0,156	,935	-0,001	invariant
BC_1 BC_3	384,817	168	0,028	2	0,986	,937	0,001	invariant
BC_1 BC_4	387,091	168	2,302	2	0,316	,936	0	invariant
BC_1 BC_5	387,091	168	2,302	2	0,316	,936	0	invariant
BC_2 BC_3	389,580	168	4,791	2	0,094	,935	-0,001	noninvariant
BC_2 BC_4	393,904	168	9,115	2	0,010	,934	-0,002	noninvariant
BC_2 BC_5	388,508	168	3,719	2	0,156	,935	-0,001	invariant
BC_3 BC_4	386,733	168	1,944	2	0,378	,936	0	invariant

BC_3 BC_5	384,817	168	0,028	2	0,986	,937	0,001	invariant
BC_4 BC_5	387,901	168	3,112	2	0,211	,936	0	invariant

Source: own elaboration on AMOS

When grouping BC_2 and BC_3 or BC_2 and BC_4 noninvariance is proved, as it can be seen in Table 17.

In the following table, it can be seen a resume of which items of Cognitive brand trust and Brand Credibility show invariance or noninvariance, and the respective items' description. In the case of Brand credibility, the table represents the fact that noninvariance only appear when grouping items.

Table 18 - Invariance / Noninvariance Items' description

Construct	Invariance / Noninvariance	Items
Cognitive brand trust	Noninvariance	CBT_1: I can confidently depend on this brand since it does not adversely affect my baby by functioning carelessly
		CBT_3: Given by this brand's past record, I have strong reason to doubt its effectiveness*
	Invariance	CBT_2: Given by this brand's past record, I see no reason to doubt its competence

Brand credibility	Noninvariance	BC_2: This brand has the ability to deliver what it promises
		BC_3: This brand's product claims are believable
	Invariance	BC_3: This brand's product claims are believable
		BC_4: This brand has a name you can trust
		BC_1: This brand reminds me of someone who is
		BC_2: This brand has the ability to deliver what it promises
		BC_3: This brand's product claims are believable
		BC_4: This brand has a name you can trust
		BC_5: This brand does not pretend to be something it is not

Source: own elaboration

7. Discussion

This chapter intends to discuss the results of the previous one, keeping in account the theoretical support presented in the Literature review chapter.

Taking into consideration the data gathered, the fruit compote for babies' buyers are majority female (69%), and they are 26 to 35 years old (34,7%) and hold a bachelor degree (48,2%). In Portugal, are frequently mothers who take care of family feed. Also, the previous study conducted by Srivastava *et al.* (2016), mentions various authors who proved that mothers are the primary caregivers for children. In 2016, the average age of women who gave birth in Portugal was 31,9 years old (Pordata Portugal, 25/07/2017), which provides support to the profile of the respondents.

After the validation of the sample characteristics is now possible to proceed with the discussion of the results of the constructs belonging to the proposed model.

Recalling the first question of this study research objective, it is "How is Affective brand trust formed in the context of baby category?". To answer the first question, Brand credibility will be discussed as an antecedent of Cognitive brand trust, and Cognitive brand trust as an antecedent of Affective brand trust, and consequently compared with the results of previous studies. Distinctly, Consumer's consumption of brand related social media content will be discussed as an antecedent of Cognitive and Affective brand trust.

Given the results presented in the previous section (see Table 14), it is possible to affirm that the first hypothesis of the investigation is confirmed, with an acceptable loading. So, in fact, Brand credibility positively and directly influences Cognitive brand trust. Srivastava *et al.* (2015) and Srivastava *et al.* (2016) also proved this relation in their studies about baby care category. Additionally, it is important to note that Brand credibility is commonly accepted as a brand trust antecedent. For example, Lassoued and Hobbs (2015) prove that brand competence, credibility, benevolence, and reputation contribute to overall consumer trust in brands in the case of bagged salad; Gurviez and Korchia (2003) prove in their study that Brand credibility is an antecedent of brand trust in the context of cosmetics and Coca-cola.

It is also possible to conclude that the fourth hypothesis of the investigation is confirmed: Cognitive brand trust positively and directly influences Affective brand trust. As Lewis and Weigert (1985) acknowledge, Cognitive brand trust should exist before affective trust since it provides a base for Affective brand trust. Johnson and Grayson (2005) and the already mentioned studies of Srivastava *et al.* (2015) and Srivastava *et al.* (2016) also prove this relation.

Regarding the construct Consumer's consumption of brand related social media content, it is possible to affirm that the second hypotheses is not confirmed and the third hypotheses is confirmed. This means, Consumer's consumption of brand related social media content does not positively and directly influence Cognitive brand trust, but it positively and directly influences Affective brand trust.

The discussion of these two hypotheses is particularly interesting since literature does not prove these relationships. However, these relationships were considered in the proposed model of this study, because Facebook, YouTube, Twitter, among others, have become more and more significant in consumers' lives. Nowadays, consumers' relationship with social media is reshaping consumers' engagement with brands and consequently marketing, due to social media interactive nature (Schivinski *et al.*, 2016). So, it is mandatory for the academy to study the relationship between relevant constructs regarding social media engagement - such as Consumer's consumption of brand related social media content, which is the first and most relevant level of Consumer's engagement with brand related social media content (Schivinski *et al.*, 2016) – and Cognitive and Affective brand trust.

Moreover, it is important to note that some previous literature already has predicted the relevance of studying and crossing engagement concepts with brand trust topic. Brodie *et al.* (2013) mention that engaged consumers exhibit enhanced trust, among other consequents. Their study identifies trust and commitment, among others, as consumer engagement outcomes. They also mention other authors who previously talked about the topic: Casalo *et al.* (2007) and Hollebeek (2011).

Therefore, it is now essential to understand why Consumer's consumption of brand related social media content does not positively and directly influence Cognitive brand trust, but it positively and directly influences Affective brand trust. So, when talking about social media, we are talking about relational marketing, which assumes an approach related to opinions and personal evaluations. That is one very reasonable reason for the cognitive aspect do not be potentialized in the context of social media. Perhaps, when the engagement with the brand on social media starts, the cognitive knowledge is already settle. The object of study of this dissertation intensifies this interpretation, since people tend to intensely search for knowledge concerning products for babies both offline and online.

To conclude the analysis of those relationships, it is important to note that Brand credibility is the construct with more impact on Cognitive brand trust, and Cognitive brand trust is the construct with more impact on Affective brand trust, immediately followed by Brand credibility.

Finally, in order to answer the second question of this study research objective – “Are there relevant differences between the model in the case of an insignia or a national brand?”- it was conducted a multi group analysis. It evaluates to what extent the configuration and the parameters of a psychometric instrument are invariant (equivalent) in several groups. The results of the configural and metric invariance will be explained in detail.

Firstly, it can be concluded that the model proved configural invariance. That means the proposed model is robust. However, about metric invariance the conclusions are not so clear. $\Delta \chi^2$ demonstrates noninvariance but ΔCFI demonstrates invariance (see Table 15). In the context of this study, it was assumed metric noninvariance, the analysis proceeded and the test of invariance of factor loadings relative to items was conducted.

The analysis showed evidence that metric noninvariance has its roots on Brand credibility and Cognitive brand trust constructs (see Table 16).

As it was discussed in Literature review chapter, Brand credibility has been predominantly conceptualized as a signal of product quality (Keller and Aaker, 1992; Srivastava *et al.*, 2016) and as a signal that the brand must have some competence in the area (Keller and Aaker, 1992). As Brandão (2014) acknowledge, some consumers still have a stigma related to insignia brands value, mostly because there is an association of low cost products with lower quality to them. In conclusion, metric noninvariance is not unexpected in this particular construct, specifically because we are working in the context of baby food category. It is also important to note that this study is confronting two significantly different brands: Continente, that is an insignia brand; and Nestlé, that is a well established brand in Portugal, and that has been passing and proving quality through generation to generation.

In a deeper analysis, none of the five items of Brand credibility showed metric noninvariance individually (see Table 16), however, when grouping BC_2 and BC_3 or BC_2 and BC_4, it showed metric noninvariance (see Table 17). These items are: BC_2 “This brand has the ability to deliver what it promises”; BC_3 “This brand’s product claims are believable”; BC_4 “This brand has a name you can trust”.

The same logic must be applied to Cognitive brand trust. As it was mention in Literature review chapter, Cognitive brand trust emerges from an accumulated knowledge that allows customers to make predictions, with a certain level of confidence and allows customers to build confidence that the brand will meet its obligations (Johnson and Grayson, 2005). However, consumers perceive national brands as safest and with less quality variation than insignia brands (Rubio *et al.* 2014). This triggers uncertainty about satisfaction levels of the products (Da Silva Borges *et al.*, 2016). Thus, once again, metric noninvariance is not surprising in this construct. Since customers perceive quality variation differently when referred to an insignia or a national brand, it seems natural that Cognitive brand trust would be formed somehow differently for each brand.

In a deeper analyse concerning Cognitive brand trust, none of the two items showed invariance (see Table 16). Remembering the items, they are: CBT_1 “I can confidently depend on this brand since it does not adversely affect my baby by functioning

carelessly”; CBT_3 “Given by this brand’s past record, I have strong reason to doubt its effectiveness”.

After discussing the results, the conclusions and limitations of this study will consequently be presented. Also, some considerations for future research will be given.

Conclusion

This dissertation intended to contribute to the literature of Brand Management. In this conclusion, the main conclusions of the dissertation will be presented, as well as its academic and managerial contributions. In terms of managerial implications, a brand trust scale provides to the managers a useful tool to create and increase stockholders trust in a brand (Bastos *et al.*, 2015). Thus, this conclusion will provide fruitful insights. Also, main limitations and suggestions for future research will be referred.

This study highlights the growing importance that Brand trust has achieved both in the world of management, whether in the academic world. The topic has been studied by several authors. Firstly, brand trust was analysed in the marketing literature globally, without specific dimensions. Then, due to the increasing relevance of the topic, it became mandatory to the academy to understand the specific dimensions/antecedents of brand trust, keeping in mind emotions and rationality. Subsequently, nowadays academic studies are focused on analysing brand trust as a macro topic.

However, despite the unanimous opinion that the brand trust is important to the consumer-brand relationship, there are no consensus either on a standard definition of brand trust, on its dimensionality, or approaches to its measurement (Lassoued and Hobbs, 2015). Previous studies about the topic have essentially focused on commonly purchased low inherent risk products (Srivastava *et al.*, 2016). Thus, this study contributes to filling this gap since it empirically investigates Cognitive and Affective brand trust antecedents in the context of a high perceived risk product category. The main innovativeness of the proposed model is the empirical investigation of Consumer's consumption of brand-related social media content as an antecedent of Cognitive and Affective brand trust, with the surplus of empirically examine the invariance of the proposed model between two different groups - insignia brand and national brand, which is a relevant topic nowadays.

A quantitative research methodology using an online survey questionnaire to collect data was conducted. In order to analyse the results and test the hypotheses, the Structural Equation Model (SEM) was used. Baby food category (Fruit compotes) was the object of this study, since it represents a high-risk product category where trust gains extra importance.

Hence, this study contributes to a better academic and management knowledge about brand trust formation, by introducing a model that has not been applied in this research area before. The proposed model measures Affective brand trust through Cognitive brand trust which is the moderate variable in this model, and Brand credibility and Consumer's consumption of brand-related social media content, which are the starting point of the proposed model.

The proposed model considers Cognitive and Affective brand trust as distinct constructs once these dimensions affect consumer-brand relationship differently with unique antecedents (Srivastava *et al.*, 2016).

So, in fact, the study showed that Cognitive brand trust positively and directly influences Affective brand trust. Also, Consumer's consumption of brand related social media content positively and directly influences Affective brand trust. This relationship is a novelty since previous literature does not prove it. Thus, it is a useful insight to management.

Regarding Cognitive brand trust antecedents, in this study Consumer's consumption of brand related social media content is not confirmed as a Cognitive brand trust antecedent. This relationship was not previously proven in previous literature.

This study proves that Brand credibility positively and directly influences Cognitive brand trust. This relationship is not new in the Brand trust literature since previous authors have already proved Brand credibility as an antecedent of Cognitive brand trust or, more generally, as an antecedent of brand trust. This relationship is very logic since it seems natural that if a brand is credible, it will be trustful in a Cognitive point of view.

After analysing the research hypotheses, it was conducted a multi group analysis to evaluate to what extent the configuration and the parameters of a psychometric instrument are invariant (equivalent) in several groups. The analysis showed evidence that the metric noninvariance in the model has its roots on Brand credibility and Cognitive brand trust constructs. Metric noninvariance is not unexpected in these constructs, specifically because the object of study is Baby food category (Fruit compotes), a high inherent risk

category. In this particular context, is not a surprise that some consumers still have a stigma related to insignia brands value, mostly because they associate low-cost products with lower quality. Thus, it is also important to note that this study is confronting two significantly different brands: Continente, that is an insignia brand; and Nestlé, that is a well-established brand in Portugal, and that has been passing and proving quality through generation to generation.

Despite the efforts to reach the fruit compotes for babies' buyers, it would be better to have a bigger sample. Also, the brands chosen for this study are very different in terms of positioning and maturity in the Portuguese market. This fact probably influences the proposed model results.

To future investigations it would be fruitful to study more into detail the relationship between Affective brand trust and Consumer's consumption of brand-related social media content and the succeeding levels of Consumer's engagement with brand related social media content, which are: Consumer's contribution to brand-related social media content and Consumer's creation to brand-related social media content. Additionally, it would be very interesting to study which kind of social media content and which platforms most influence the relationship between Affective brand trust and Consumer's consumption of brand-related social media content.

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Appendix

A – Questionnaire

A.1 – Insignia Brand Survey (Continente)

Confiança na marca – Boiões de Fruta Continente

Este inquérito destina-se a compradores de boiões de fruta para bebés (até 2 anos) que sejam residentes em Portugal Continental.

POR FAVOR, PARA RESPONDER A ESTE INQUÉRITO TENHA EM MENTE OS BOIÕES PURÉ DE FRUTA PARA BEBÉ MARCA CONTINENTE.

O tempo estimado para o preenchimento do questionário é de 5 minutos.

O inquérito é anónimo e os dados serão utilizados unicamente no âmbito deste estudo.

Desde já muito obrigada pela sua participação neste estudo.

Grupo A

[] *

Por favor, selecione a posição apropriada para cada elemento:

Eu posso ter confiança na marca Continente, uma vez que não afeta negativamente o meu bebé, funcionando descuidadamente

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tendo em conta a performance passada desta marca, não há duvida da sua competência

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tendo em conta a performance passada desta marca, há fortes razões para duvidar da sua efetividade

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo B

[] *

Por favor, selecione a posição apropriada para cada elemento:

O Continente apenas tem interesse em vender os seus produtos

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Esta marca tem uma atitude quente e carinhosa com os bebés

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Se eu não pudesse usar mais esta marca, iria ter um sentimento pessoal de perda

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eu sinto que a marca iria responder carinhosamente, se eu enfrentasse um problema com o produto

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo C

[] *

Por favor, selecione a posição apropriada para cada elemento:

O Continente transmite competência e transmite que sabe o que está a fazer

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Esta marca tem a capacidade de entregar o que promete

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

As reivindicações (características anunciadas) de produtos desta marca são credíveis

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Esta marca tem um nome em que podemos confiar

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Esta marca não pretende ser algo que não é

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Grupo D

[] *

Por favor, selecione a posição apropriada para cada elemento:

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Eu leio publicações relacionadas com o Continente nos social media

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Eu leio fanpages desta marca nos social network sites

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Eu vejo imagens / gráficos relacionados com esta marca

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Eu sigo blogues relacionados com esta marca

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Eu sigo esta marca nos social network sites

1 = Discordo totalmente 2 3 4 5 6 7 Não sei / Não se aplica
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Grupo E

[]Género *

Por favor, selecione apenas uma das seguintes opções:

- ☐ Masculino
- ☐ Feminino

[]Idade *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- ☐ <18
- ☐ 18 a 25 anos
- ☐ 26 a 35 anos
- ☐ 36 a 45 anos

- 46 a 55 anos
- 56 a 65 anos
- Mais de 65 anos

[]Escolaridade *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- Ensino Básico
- Ensino Secundário
- Licenciatura
- Mestrado
- Doutoramento

[]Rendimento líquido mensal do agregado familiar *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- <=1000€
- 1001 a 2000€
- 2001 a 3000€
- >3000€

[]Zona Geográfica de residência *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- Viana do Castelo
- Braga
- Bragança
- Proto
- Viseu
- Guarda
- Aveiro
- Coimbra
- Castelo Branco
- Leiria
- Santarém
- Vila Real
- Lisboa
- Évora
- Beja
- Portalegre
- Setúbal
- Faro

Muito obrigada pela sua participação!

20/06/2017 – 19:16

A.2 – National Brand Survey (Nestlé)

Confiança na marca – NATURNES Boiões de Fruta Nestlé

Este inquérito destina-se a compradores de boiões de fruta para bebés (até 2 anos) que sejam residentes em Portugal Continental.

POR FAVOR, PARA RESPONDER A ESTE INQUÉRITO TENHA EM MENTE OS NATURNES BOIÕES DA NESTLÉ.

O tempo estimado para o preenchimento do questionário é de 5 minutos.

O inquérito é anónimo e os dados serão utilizados unicamente no âmbito deste estudo.

Desde já muito obrigada pela sua participação neste estudo.

Grupo A

[] *

Por favor, selecione a posição apropriada para cada elemento:

Eu posso ter confiança na Nestlé, uma vez que não afeta negativamente o meu bebé, funcionando descuidadamente

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tendo em conta a performance passada desta marca, não há duvida da sua competência

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tendo em conta a performance passada desta marca, há fortes razões para duvidar da sua efetividade

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo B

[] *

Por favor, selecione a posição apropriada para cada elemento:

A Nestlé apenas tem interesse em vender os seus produtos

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Esta marca tem uma atitude quente e carinhosa com os bebés

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Se eu não pudesse usar mais esta marca, iria ter um sentimento pessoal de perda

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eu sinto que a marca iria responder carinhosamente, se eu enfrentasse um problema com o produto

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo C

[] *

Por favor, selecione a posição apropriada para cada elemento:

A Nestlé transmite competência e transmite que sabe o que está a fazer

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Esta marca tem a capacidade de entregar o que promete

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As reivindicações (características anunciadas) de produtos desta marca são credíveis

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Esta marca tem um nome em que podemos confiar

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Esta marca não pretende ser algo que não é

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo D

[] *

Por favor, selecione a posição apropriada para cada elemento:

Eu leio publicações relacionadas com a Nestlé nos social media

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eu leio fanpages desta marca nos social network sites

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eu vejo imagens / gráficos relacionados com esta marca

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eu sigo blogues relacionados com esta marca

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eu sigo esta marca nos social network sites

1 = Discordo totalmente	2	3	4	5	6	7	Não sei / Não se aplica
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo E

[] Género *

Por favor, selecione apenas uma das seguintes opções:

- ☐ Masculino
- ☐ Feminino

[] Idade *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- ☐ <18
- ☐ 18 a 25 anos
- ☐ 26 a 35 anos
- ☐ 36 a 45 anos
- ☐ 46 a 55 anos
- ☐ 56 a 65 anos
- ☐ Mais de 65 anos

[] Escolaridade *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- ☐ Ensino Básico
- ☐ Ensino Secundário
- ☐ Licenciatura
- ☐ Mestrado
- ☐ Doutoramento

[] Rendimento líquido mensal do agregado familiar *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- ≤1000€
- 1001 a 2000€
- 2001 a 3000€
- >3000€

[] Zona Geográfica de residência *

Escolha uma das seguintes respostas

Por favor, selecione apenas uma das seguintes opções:

- Viana do Castelo
- Braga
- Bragança
- Proto
- Viseu
- Guarda
- Aveiro
- Coimbra
- Castelo Branco
- Leiria
- Santarém
- Vila Real
- Lisboa
- Évora
- Beja
- Portalegre
- Setúbal
- Faro

Muito obrigada pela sua participação!

20/06/2017 – 19:16

B – Factorial analysis

B.1 – Communalities (Source: own elaboration on SPSS)

CBT

	Initial	Extraction
CBT_1	1,000	,861
CBT_2	1,000	,441
CBT_3	1,000	,790

Extraction Method: Principal Component Analysis.

ABT

	Initial	Extraction
ABT_1	1,000	,236
ABT_2	1,000	,758
ABT_3	1,000	,568
ABT_4	1,000	,820

Extraction Method: Principal Component Analysis.

BC

	Initial	Extraction
BC_1	1,000	,820
BC_2	1,000	,815
BC_3	1,000	,845
BC_4	1,000	,838
BC_5	1,000	,636

Extraction Method: Principal
Component Analysis.

CCBRSMC

	Initial	Extraction
CONS_1	1,000	,642
CONS_2	1,000	,859
CONS_3	1,000	,793
CONS_4	1,000	,790
CONS_5	1,000	,820

Extraction Method: Principal
Component Analysis.

B.2 – Total Variance Explained (Source: own elaboration on SPSS)**CBT**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,092	69,735	69,735	2,092	69,735	69,735
2	,719	23,965	93,701			
3	,189	6,299	100,000			

Extraction Method: Principal Component Analysis.

ABT

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,381	59,535	59,535	2,381	59,535	59,535
2	,874	21,858	81,393			
3	,566	14,162	95,555			
4	,178	4,445	100,000			

Extraction Method: Principal Component Analysis.

BC

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,954	79,071	79,071	3,954	79,071	79,071
2	,465	9,294	88,365			
3	,221	4,417	92,782			
4	,189	3,787	96,569			
5	,172	3,431	100,000			

Extraction Method: Principal Component Analysis.

CCBRSMC

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,903	78,062	78,062	3,903	78,062	78,062
2	,499	9,988	88,050			
3	,258	5,166	93,217			
4	,203	4,065	97,281			
5	,136	2,719	100,000			

Extraction Method: Principal Component Analysis.